les Plantes maritimes; par M. Pierre Lesage (Revue Génér. de Bot. Fev., Mars, April, '90).

This paper sets forth elaborate experiments on the variations of inland plants grown at the seashore. Ninety species taken from thirty-two orders were studied and three plants especially were cultivated, *Pisum sativum, Linum grandiflorum* and *Lepidium sativum.* The stated results of the experiments are here translated as closely as possible.

1st. Plants growing by the sea generally have thicker leaves than when they grow inland. All plants naturally do not follow this rule.

2d. In plants that most successfully submit to maritime influence, the palisade-cells are much developed. If the thickness of the leaf has notably increased, the palisades are much lengthened, at the same time the number of the mesophyll layers may augment or remain the same, according to the species. If the leaf keeps to more or less the same thickness in the different cases, the palisades are developed so that the relation of the palisadic tissue to the mesophyll is greatest at the seashore.

3d. The lacunæ are greatly reduced in plants of the seaboard.

4th. Chlorophyll tends to be less abundant in the cells of plants on the shore. This conclusion is less rigorous than the preceding ones. It cannot be verified well, except in plants stationed where they can be more or less inundated by the sea or where they can receive the salt mist from the waves in large quantities.

5th. The carnosity, the development of the palisades, the reduction of the lacunæ and the diminution of the chlorophyll can be obtained in experimental cultivation, where the variable element is salt. A. M. V.

Index to Recent American Botanical Literature.

Æsculus Parryi. C. S. S. (Garden & Forest, iii. 356, Fig. 47).

Apical growth in Roots of Marsilia quadrifolia and Equisetum arvense. Wm. M. Andrews (Bot. Gaz. xv. 174-177, illustrated).

Chestnut Tree—The. (Garden & Forest, iii. 353, 354, illustrated).

Clematis Fremontii. (Garden & Forest, iii. 380, fig. 49).

Cornaceæ—A Revision of North American. J. M. Coulter and W. H. Evans. (Bot. Gaz. xv. 30–38, 86–97 ; also reprinted).

In this revision the authors lay considerable stress upon the characters of the stones of the fruit as points of distinction, not only between species, but also between sections, in their arrangement of the genus *Cornus*. *C. Drummondii*, C. A. Meyer, is relegated to a variety of *C. asperifolia*, Michx. *C. Californica*, C. A. Meyer, is considered to be a variety of *C. pubescens*, Nutt. *C. candidissima*, Marsh. (1785), replaces *C. paniculata*, L'Her., (1788). *C. Greenei* is described as a new species founded on specimens furnished by Prof. E. L. Greene, from California. *C. Baileyi* is also named as a new species, from specimens collected about the Great Lakes and westward. The same species was distributed by Dr. Porter as *C. pubescens*, and has been confused with several other species. In regard to these the authors say: "*C. stolonifera*, *C. Baileyi* and *C. pubescens* form a very perplexing and apparently confluent group of species. In all probability they freely cross with one another, and some of the puzzling intermediate forms may be hybrids." The genus *Nyssa* is also arranged according to the characteristics of the fruit and their stones. Only four species are recognized.

Under the genus *Garrya*, *G. Lindheimeri*, Torr. becomes *G. ovata*, Benth. var. *Lindheimeri ; G. flavescens*, Watson, becomes *G. Veatchii*, Kellogg, var. *flavescens* and *G. flavescens*, var. *Palmeri*, Watson, becomes *G. Veatchii*, Kellogg. A. H.

Fungi in the Collection of the Association—List of Staten Island. Arthur Hollick & N. L. Britton. (Proc. Nat. Sci. Assn. S. I. Special No. 11, Aug., 1890).

This list of forty-two species of fungi was prepared from specimens collected on Staten Island by the members of the Natural Science Association and submitted to Mr. J. B. Ellis for determination. As might be expected, the species are such as are more or less conspicuous—thirteen of them being in the genus *Polyporus*. In regard to *P. rimosus*, Berk., Mr. Ellis says, in a foot-note: "Your specimen is the first I have seen from this region."

Goanese Ipecac. H. H. Rusby. (Reprint from Drug. Bull., July, 1890, illustrated).

Under this title is a description and plate of *Naregamia alata*, W. & A.

History of Garden Vegetables. E. L. Sturtevant. (Am. Nat. xxiv. 629-646).

This contribution to the subject contains notes on "Rocket Salad," (*Brassica eruca*); "Rosemary," (*Rosemarinus officinalis*); "Rue," (*Ruta graveoleus*); "Ruta-baga," (*Brassica Napobrassica*); "Saffron," (*Crocus sativus*); "Sage," (*Salvia officinalis.*); "Salsify," (*Tragopogon porrifolius*); "Samphire," *Crithmum maritimum*); "Savory" (*Satureja* sp.); Savoy Cabbage, (*Brassica oleracea bullata*); Scarlet Runner Bean, (*Phaseolus multiflorus*); Scolymus, (*Scolymus Hispanicus*); Scorzonera (*Scorzonera Hispanica*); "Scurvy Grass," (*Cochlearia officinalis*, "Sea Kale," (*Crambe maritima*) and "Shallot," (*Allium ascalonicum*).

List of Plants collected by Dr. Edward Palmer, in 1888, *in Southern California.* Geo. Vasey and J. N. Rose (Contr. Nat. Herb., No. 1., 1-8).

An enumeration of two hundred and forty-seven species, many of them rare. No new species are described.

List of Plants collected by Dr. Edward Palmer, in 1889, *at Lagoon Head, Cedros Island, San Benito Island, Guadalupe Island and at the Head of the Gulf of California.* Geo. Vasey and J. N. Rose. (Contrib. Nat. Herb., No. 1, 9-28).

An enumeration of several hundred species including descriptions by Mr. Rose of new ones in the genera *Sisymbrium, Encelia, Phacelia, Nicotiana, Eschscholtzia, Sphæralcea* and *Hemizonia*, and *Euphorhia Pondii*, Millspaugh.

Mosses of Staten Island—Preliminary list of the. E. G. Britton. (Proc. Nat. Sci. Assn. S. I., Special No. 10, July, 1890).

In this list are enumerated five species and varieties of Sphagna and ninety-six Musci. In a brief head-note the author says that the specimens upon which the list is founded were collected during a period of about eight years, and it is to be considered as very nearly complete, but additions may be looked for in the genera *Bryum, Barbula* and *Orthotrichum.*

Native Shrubs of California—IV. E. L. Greene. (Garden and Forest, iii. 378, 379).

Interesting memoranda upon four species of *Lavatera* are given under this heading, the first one of which, (*L. assurgentiflora*), is the only species inhabiting the main land. Of the other three each one inhabits an island of its own off the coast of Lower California. *L. venosa* is confined to the island of San Benito, *L. insularis* to Coronado Island and *L. occidentalis* to Guadalupe.

Notes on North American Trees.—XX. C. S. Sargent. (Garden and Forest, iii. 355–356).

Description of the wood of the following species are given: *Terminalia Buceras, Quercus tomentella, Cupressus MacNabiana, Picea Breweriana* and *Larix Lyallii.*

Osservazioni sulla Mina lobata. G. E. Mattei. (Nuevo Giorn. Bot. Ital. xxii. 290).

Pitcher Plants. Sophie B. Herrick. (The Great Divide, iii. 74, 75).

The editors of the "Great Divide" are evidently not botanists, or else they presume upon not having botanists on their list of subscribers, otherwise this extraordinary article could certainly not have appeared. The text is written in the usual style of a popular treatise and contains but little information that is deceptive. In the illustrations, however, a *Cephalotus* is boldly called *Sarracenia variolaris,* a *Nepenthes* is labelled *Darlingtonia Californica,* and a *Darlingtonia* is named *Sarracenia purpurea.* There is also a figure of *Utricularia* which, as the name is suggested, might be recognized for a member of that genus.

Plant Diseases—On the Nature of Certain. A. L. Kean. (Bot. Gaz. xv. 171–174).

Plant Notes. E. J. Hill. (Garden and Forest, iii. 370).

Memoranda upon *Hypericum Kalmianum* and *Lobelia Kalmii.*

Ramularia on Cotton—A New. Geo. F. Atkinson. (Bot. Gaz. xv. 166–168, illustrated).

Ramularia areola is described and figured as new.

Schubertia grandiflora, Mart. and Zucc. S. W. (Garden and Forest, iii. 368, fig. 48).

Tecoma radicans. W. Goldring. (Garden, xxxviii. 51, illustrated).

Upon a Collection of Plants made by Mr. G. C. Nealley in the region of the Rio Grande in Texas, from Brazos Santiago to El Paso County. John M. Coulter. (Contrib. Nat. Herb. No. 2, pp. 65, Washington, 1890).

Mr. Nealley has been employed by Dr. Vasey for several years in the collection of the plants of southwestern Texas. He has succeeded in finding many of the rarer species, not obtained since the time of the Mexican Boundary Survey, and in addition to this has discovered a considerable number of undescribed species. Among the most interesting of the plants enumerated by Professor Coulter, are *Castalia elegans*, found in considerable abundance in a new locality. *Castalia flava*, to which is doubtfully referred all the Texano-Mexican yellow water-lily specimens, including Bourgeau's No. 4, from Santa Anita, and Pringle's No. 1,956, from Brownsville, distributed as *Nymphæa Mexicana; Thelypodium Vaseyi*, n. sp., *Abutilon Nealleyi*, n. sp., *Sphæralcea subhastata*, n. sp., *Cardiospermum molle*, and *Desmodium spirale*, new to the United States, *Pithecolobium Texense*, n. sp., *Gaura Nealleyi*, n. sp., *Turnera diffusa*, var. *aphrodisiaca*, new to the United States, *Aplopappus Nealleyi* and *A. Texense*, n. sp., *Viguiera longipes*, n. sp., *Perityle Vaseyi*, n. sp., *Ipomœa Nealleyi*, and *I. Texana*, n. sp., *Eriogonum Nealleyi*, n. sp. and *Euphorbia Vaseyi*, n. sp. The Juncaceæ and Cyperaceæ, named by Mr. Coville, include several species heretofore only sparingly collected. Dr. Vasey enumerates the Gramineæ and describes the following new species: *Panicum capillarioides*, *Muhlenbergia Lemmoni*, Scribn., *Sporobolus Nealleyi* and *S. Texanus; Trisetum Hallii*, Scribn., *Bouteloua breviseta*, *Triodia eragrostoides*, Vasey and Scribn.; *T. grandiflora* and *Poa Texana*. The Pteridophyta were named by Mr. Henry E. Seaton, *Notholæna Nealleyi*, being described as new.

Altogether this is the most valuable and interesting collection recently made in the United States, and a very satisfactory result of the work of the Division of Botany in exploration. The original specific names of the plants enumerated, have been retained in many instances. We wish that this had been uniformly carried out, and the parenthetic citation of authors employed.

N. L. B.